



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,930	03/01/2004	Yoshiki Ishii	1232-5318	3251
27123	7590	06/13/2008		
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			EXAMINER HENN, TIMOTHY J	
			ART UNIT 2622	PAPER NUMBER
			NOTIFICATION DATE 06/13/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOPatentCommunications@Morganfinnegan.com
Shopkins@Morganfinnegan.com
jmedina@Morganfinnegan.com

Office Action Summary	Application No. 10/790,930	Applicant(s) ISHII, YOSHIKI	
	Examiner Timothy J. Henn	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 10, 12 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 13 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04 April 2008 has been entered.

Response to Arguments

2. Applicant's arguments filed 04 April 2008 have been fully considered but they are not persuasive. In the response filed, Applicant argues Itoh is silent about operations in which a telephoto side is continuously selected after transition from an optical zoom to an electrical zoom. However, Itoh discloses a relationship between optical zooming and electrical zooming in which optical zooming is selected up until an optical zoom limit, at which point electrical zooming will be performed (Paragraph 0055). Therefore, it is believed that Itoh meets the newly added claim limitations.

3. The amendments to claims overcome the previous objections, these objections are therefore withdrawn.

Claim Rejections - 35 USC § 102

Art Unit: 2622

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Itou (JP 2001-197347).

[claim 15]

Regarding claim 15, Itou discloses an image sensing apparatus which has an optical zoom function (Figure 1, Item 22) and an electrical zoom function (Figure 1, Item 60) and in which a sensed image sensed at a photographing magnification ratio covered by the optical zoom function is recorded as a reduced image obtained by reducing the sensed image to an image having a predetermined number of pixels smaller than a number of pixels of the sensed image (i.e. an output resolution; Paragraph 0036), and when photographing at a magnification ratio more than a maximum photographing magnification ratio covered by the optical zoom function is instructed, an image generated from the sensed image by using the electrical zoom is recorded (Paragraphs 0038-0040), comprising: storage means for storing a set value representing, of photographing magnification ratios that the electrical zoom function copes with, a maximum magnification ratio that is to be used in image sensing (i.e. a condition at which the use of first zoom processing is halted and second zoom processing is started; Paragraphs 0036 and 0042); first electrical zoom means for extracting the image having the predetermined number of pixels from the sensed image to obtain an enlarged image

(e.g. Paragraph 0010 and 0041; obtaining image data from a selected range or “cropping”); second electrical zoom means for extracting a partial image of the enlarged image and enlarging the partial image to the image having the predetermined number of pixels to obtain an enlarged image (interpolation; Paragraphs 0010 and 0042-0044) and switching means for switching, in accordance with the set value, between image sensing which is to be executed using both the first electrical zoom means and the second electrical zoom means and image sensing which is to be executed using only the first electrical zoom means (Paragraphs 0041-0044; Figure 5).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 7-9, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itou (JP 2001-197347) in view of Parulski (US 6,539,177).

[claim 1]

Regarding claim 1, Itou discloses a signal processing apparatus (Figure 1, Item 60) which changes a magnification ratio of an image acquired by image sensing means (Figure 1, Item 20), comprising: first processing means for executing first signal processing for reducing a number of pixels to be recorded than that of the acquired pixels when the magnification ration of the image is to be increased (e.g. Paragraph

Art Unit: 2622

0010 and 0041; obtaining image data from a selected range or “cropping”); second signal processing means for executing second signal processing for increasing a number of pixels to be recorded when the magnification ratio of the image is to be increased (interpolation; Paragraphs 0010 and 0042-0044; it is noted that the interpolation of the second signal processing acquires a small number of pixels from the center of the image and increases that number to a larger number as claimed); optical zoom controlling means for controlling lens optical system when the magnification ratio is to be increased (Figure 1, Item 42; Paragraph 0019); first detection means for detecting selection of zooming using a zoom key (Figure 1, Item 118; Paragraphs 0038-0040); second detection means for detecting a limit of an increase in magnification ratio of the image by the first signal processing (Paragraph 0042; judgment section 260) and selection means for selecting one of a first mode and a second mode (Paragraph 0042); wherein when the first detection means detects that a zoom operation is continuously selected after transition from a control of the lens system by the optical zoom controlling means to the first signal processing (Paragraph 0055), the first signal processing is executed and when the second detection means detects that the increase in magnification ratio of the image by the first signal processing means has reached the limit, the second signal processing means is subsequently executed (Paragraph 0042). Itou discloses warning a user when further zooming of an image may result in a less than optimal picture prior to performing the second signal processing and does not explicitly disclose a first mode which performs the second signal processing without inhibiting and a second mode which inhibits the second signal processing.

Parulski discloses a digital camera in which different modes can be set for beginner, intermediate and advanced users that control the number and type of messages a camera relates to a user during image capture (c. 19, l. 60 - c. 20, l. 65). The camera of Parulski includes modes which give suggestions regarding the zooming state of an image and at least a mode in which all suggestions are turned off (c. 19, l. 64 - c. 20, l. 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include modes as described by Parulski to allow a user to turn off the warning message generated when further zooming is instructed if the user does not desire to receive such messages from the camera. The examiner notes that in an "off" mode the second signal processing would not be inhibited and in an "on" (i.e. beginner) mode, the second signal processing would be inhibited. While Itou in view of Parulski discloses a zoom button and a first detection means, the zoom button and detection means is not explicitly disclosed as including a telephoto side and a wide angle side.

Official Notice is taken that zoom control buttons including telephoto sides and wide angle sides are notoriously well known in the art to provide full control of zooming without requiring two individual switches for zooming out and zooming in instructions. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a switch and detection means which includes a telephoto side to allow a user to instruct zooming in and a wide angle side to allow a user to instruct zooming out.

[claim 7]

Regarding claim 7, Itou discloses enlarging the signal by the second signal processing (Paragraph 0044; interpolation).

[claim 8]

Regarding claim 8, Itou in view of Parulski disclose a signal storage apparatus for storing the image (Figure 1, Item 76; Paragraph 0033). For further details see the rejection of claim 1.

[claim 9]

Regarding claim 9, Itou in view of Parulski discloses a signal processing apparatus (e.g. Itou, Figure 1, Item 60); optical variable magnification means for changing a view angle of an object image formed on a light receiving surface of the image sensing means (Figure 1, Item 22 and Item 30) wherein the variable magnification by the optical variable magnification means is executed in first signal processing (Paragraph 0038-0040). For further details see the rejection of claim 1.

[claim 11]

Claim 11 is a method claim corresponding to apparatus claim 1. Therefore, claim 11 is analyzed and rejected as previously discussed with respect to claim 1 above.

[claim 13]

Claim 13 is a program claim corresponding to apparatus claim 11. Official Notice is taken that it is notoriously well known in the art to implement image processing methods and camera control methods in programs to make use of general purpose processors and to not require the creation of application specific circuits. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was

made to implement the method of claim 11 in a program to construct the camera using general purpose processors.

8. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itou (JP 2001-197347) in view of Parulski (US 6,539,177) in view of Hashimoto (US 4,910,599).

[claim 2]

Regarding claim 2, Itou in view of Parulski discloses a first signal processing means which reduces an amount of image data, but do not explicitly disclose how this operation is carried out.

Hashimoto discloses an imaging apparatus including an electronic zooming operation in which a reduced amount of data is obtained. The system of Hashimoto uses varying reading signals in order to obtain the needed data while reading out unnecessary portions of the image at a high frequency in a blanking period (c. 5, l. 58 - c. 6, l. 2). Hashimoto further discloses that a LPF operation is necessary to eliminate degradation of the image due to inclusion of vertical stripes (c. 15, l. 29-58). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use varying reading signals and a LPF to obtain a reduced image since such an operation is known in the art as an effective method for performing an electronic zooming operation. The examiner notes that a LPF inherently limits a spatial frequency band as claimed.

[claim 3]

Regarding claim 3, Hashimoto discloses changing a frequency characteristic of the spatial frequency band limit in accordance with the variable magnification ratio (Figures 13 and 14).

9. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itou (JP 2001-197347) in view of Parulski (US 6,539,177) in view of Hirose et al. (US 5,838,371).

[claim 4]

Regarding claim 4, Itou in view of Parulski discloses second signal processing means which interpolates an image signal, but does not disclose edge enhancement.

Hirose discloses that in an electronic zooming operation, horizontal and vertical resolutions of the image can be degraded resulting in a low apparent resolution and that to improve the apparent resolution edge enhancement should be performed (c. 1, ll. 16-31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include edge enhancement in the second signal processing means to increase the apparent resolution of the resulting image.

[claim 5]

Regarding claim 5, Hirose further discloses that the degree of edge enhancement should change in accordance with the magnification ratio (e.g. c. 2, ll. 41-60) to avoid overcorrection of the image.

[claim 6]

Regarding claim 6, Itou discloses a zoom switch for commanding a zoom operation (e.g. Figure 1, Item 118). It is noted that if a zoom command is not input, i.e. a magnification of x1, the first and second signal processing will not be performed.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Henn whose telephone number is (571)272-7310. The examiner can normally be reached on M-F 11-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Timothy J Henn/

Application/Control Number: 10/790,930
Art Unit: 2622

Page 11

Primary Examiner, Art Unit 2622